

REMARKS

Claims 11-15 and 21-29 remain pending in this application.

Initially, the applicants note that copies of an Information Disclosure Statement (IDS) transmittal letter, an IDS and an Information Disclosure Citation (PTO-1449) that were originally filed on June 4, 2004 were apparently lost or misfiled. These documents were resubmitted with the response filed on September 29, 2004. The applicants also attached a copy of the stamped postcard indicating receipt of these documents at the PTO on June 4, 2004. The Patent Application Information Retrieval (PAIR) system shows that the resubmitted documents were received with the response filed on September 29, 2004. The current Office Action, however, has not provided an initialed copy of the PTO-1449 indicating that the three references have been officially considered. The applicants respectfully request that the Examiner consider the documents listed on the PTO-1449, initial the PTO-1449 and return a copy of the initialed PTO-1449 with the next communication.

Claims 11-15 and 21-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Mathew et al. (U.S. Patent Application Publication No. 2003/0151077; hereinafter Mathew) and Yu (U.S. Patent No. 6,458,662) in further view of Gambino et al. (U.S. Patent No. 6,689,650; hereinafter Gambino). The rejection is respectfully traversed.

Initially, the applicants respectfully request clarification as to the grounds of rejection. It is unclear whether the rejection is based on Mathew or Yu in view of Gambino, or the combination of all three references (Mathew, Yu and Gambino). Therefore, clarification is respectfully requested in any subsequent communication.

Returning to the Office Action, the Office Action states that the rejection might be overcome by showing that the present application and Yu were both owned or subject to an

assignment to the same entity at the time the applicants' invention was made (Office Action – page 3). The applicants submit that the present application and Yu were both owned by Advanced Micro Devices, Inc. at the time the applicants' invention was made. The applicants direct the Examiner to the assignee information listed on the front page of Yu and copies of the Assignment papers and the recorded Assignment document filed with the present application on June 24, 2003. The Assignment for the parent application (Serial Number 10/290,158) assigned the entire right, title and interest in all continuations to Advanced Micro Devices, Inc. and was recorded at Reel 013479, Frame 0785.

The applicants note that based on Yu's issue date of October 1, 2002, Yu may also appear to qualify as prior art under 35 U.S.C. § 102(a), which is not subject to the exclusion under 35 U.S.C. § 103(c). Attached herewith is a Declaration under 37 C.F.R. §1.131 that provides facts to show that Yu does not qualify as prior art under § 35 U.S.C. § 102(a) with respect to the present application.

Therefore, in view of the Declaration, Yu qualifies as prior art with respect to the present application only under subsection (e) of 35 U.S.C. § 102. Since the effective filing date of the present application is November 8, 2002, which is after November 29, 1999, and the present application and Yu were both commonly assigned or subject to an obligation or assignment to Advanced Micro Devices, Inc., Yu cannot be used to preclude patentability of the present invention under 35 U.S.C. § 103.

Therefore, if the rejection is based on the combination of Mathew, Yu and Gambino, withdrawal of the rejection and allowance of claims 11-15 and 21-29 are respectfully requested.

In the event that the rejection is based on Mathew or Yu in view of Gambino, withdrawal of the rejection based on the combination of Yu and Gambino is respectfully requested.

The applicants further note that if the rejection is based on Mathew or Yu in view of Gambino, the rejection based on Mathew in view of Gambino is respectfully traversed.

Claim 11 recites forming a fin structure on an insulating layer, the fin structure including a first side surface, a second side surface, and a top surface and having a thickness ranging from about 300 Å to about 1500 Å. As discussed in the previous response, Mathew may disclose forming a fin structure 24 on insulator 14. Mathew, however, does not disclose that fin structure 24 has a thickness ranging from about 300 Å to about 1500 Å, as recited in claim 11. Mathew also does not disclose depositing a gate material over a fin structure to a thickness ranging from about 300 Å to about 1500 Å, as further recited in claim 11.

In the response to arguments section, the Final Office Action alleges that the disclosed thicknesses of the fin structure and the gate material are not critical. The Final Office Action further maintains that In re Aller supports the notion that the claimed ranges provide no support for patentability since Applicants have allegedly not disclosed anything that suggests the claimed ranges have any criticality associated with them (Final Office Action – page 5). The applicants respectfully disagree.

As discussed in the previous response, the applicants maintain that Mathew cannot be fairly construed to suggest the features discussed above. The applicants note that Mathew is totally silent with regard to the thickness of fin structure 24 and the thickness of the deposited gate material 28. Claim 11, in contrast, recites specific ranges for the thickness of the fin structure and the gate material. The applicants assert that since Mathew does not disclose any values associated with the thickness of fin structure 24 or gate material 28, Mathew cannot be fairly construed to suggest forming a fin structure having the claimed thickness and depositing gate material having the claimed thickness absent impermissible hindsight. The applicants further assert that the claimed

ranges enable the method recited in claim 11 to achieve particular advantages with respect to manufacturing a semiconductor device having the desired properties, such as advantages associated with good short channel behavior of the semiconductor device (See specification at paragraph 40 on page 9). Therefore, the applicants maintain that the claimed ranges with respect the thicknesses of the fin structure and gate material are not obvious based on the disclosure of Mathew.

Gambino has been used in the rejection to disclose annealing a semiconductor device to activate source and drain regions. Gambino, however, does not remedy the deficiencies in Mathew discussed above with respect to claim 11.

For at least these reasons, claim 11 is believed to be allowable over the combination of Mathew and Gambino. Accordingly, withdrawal of the rejection of claim 11 based on the combination of Mathew and Gambino is respectfully requested.

Claims 12-15 depend upon claim 11 and are believed to be allowable over Mathew and Gambino for at least the reasons claim 11 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Mathew and Gambino.

For example, claim 13 recites forming a dielectric layer over the top surface of the fin structure, the dielectric layer having a thickness ranging from about 150 Å to about 600 Å. Mathew discloses forming pad oxide layer 20 and/or nitride layer 22 over silicon structure 18 (Mathew – paragraph 17, lines 6-12). Mathew is totally silent with respect to the thickness of either of layers 20 and 22 and therefore cannot be fairly construed to disclose or suggest the range recited in claim 13.

For at least this additional reason, withdrawal of the rejection of claim 13 based on the combination of Mathew and Gambino is respectfully requested.

Claim 21 recites features similar to claim 11. For reasons similar to those discussed above with respect to claim 11, the combination of Mathew and Gambino does not disclose or suggest the features of claim 21. Accordingly, withdrawal of the rejection based on the combination of Mathew and Gambino is respectfully requested.

Claims 22-25 depend upon claim 21 and are believed to be allowable over the combination of Mathew and Gambino for at least the reasons claim 21 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Mathew and Gambino.

For example, claim 23 recites features similar to claim 13. For reasons similar to those discussed above with respect to claim 13, withdrawal of the rejection of claim 23 based on the combination of Mathew and Gambino is respectfully requested.

Claim 26 recites features similar to claim 11. For reasons similar to those discussed above with respect to claim 11, the combination of Mathew and Gambino does not disclose or suggest the features of claim 26.

Claim 26 further recites forming gate dielectric layers having a thickness ranging from about 10 Å to about 50 Å on opposite sides of the fin. Mathew discloses forming gate dielectric 26 on opposite sides of silicon structure 18 (Mathew – paragraph 18, lines 2-5 and Fig. 3). Mathew, however, is totally silent with respect to the thickness of gate dielectric 26 and does not disclose that gate dielectric 26 has a thickness ranging from about 10 Å to about 50 Å, as recited in claim 26. Once again, the applicants further assert that Mathew cannot be fairly construed to suggest the claimed range since Mathew is totally silent with respect to the thickness of gate dielectric 26.

For at least these reasons, claim 26 is believed to be allowable over the combination of Mathew and Gambino. Accordingly, withdrawal of the rejection of claim 26 based on the combination of Mathew and Gambino is respectfully requested.

Claims 28 and 29 depend upon claim 26 and are believed to be allowable over the combination of Mathew and Gambino for at least the reasons claim 26 is allowable. Accordingly, withdrawal of the rejection of claims 28 and 29 based on the combination of Mathew and Gambino is respectfully requested.

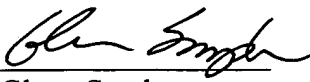
CONCLUSION

In view of the foregoing remarks, the applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application. If the Examiner does not believe that all the pending claims are in condition for allowance, the Examiner is urged to contact the undersigned attorney to expedite prosecution of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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